Overview

Background- Despite valiant efforts of administrators to maintain safe environments, crises strike higher education institutions at random causing disruptions in daily operations. This session aims to discuss practices colleges and universities take in preparation and response for natural disasters. It is grounded in a research paper that sought to answer: How do college students perceive institutions' environments after experiencing a hurricane, and how do students perceive their interactions with others?

Discussion Question 1

How do institutional researchers prepare and plan for crises that are anticipated or unanticipated?

Background Information

Data & Respondent Characteristics- Thirty institutions were selected based on if they had been affected by a natural disaster at least once during a span of two consecutive administrations of the National Survey of Student Engagement (2016-2018). Over 40,000 first year and senior students are represented in the sample. Students were categorized into experiencing or not experiencing a hurricane.

Measures & Analyses- Several engagement indicators are examined through paired sample t-tests at the institutional level and multiple linear regressions at the student level yielding mixed results. The **paired sample t-tests** were not significant in finding differences between aggregated scores of students who experienced a hurricane or did not. Two of the **regression models** were not significant while a third one did predict significant differences for students who experienced a hurricane in relation to their quality of interactions.

Limitations- The National Survey of Student Engagement only collects data on institutions that self-select to administer the survey thus the findings cannot be generalized widely. Students perceptions are captured about their institutional environments and interactions with others, thus, there could be issues of social desirability bias. Additionally, the survey is launched in the spring semester often several months after a hurricane has forced institutions closed. There are time variables that could not be accounted with the data set.

Discussion Question 2

What can be done to maintain an assessment's course in the midst of a crisis?

Results & Discussion

It does appear there are minor differences in how students perceive their quality of interactions with their peers, faculty, staff, and administrators if they experienced a hurricane. There could be a "caring-effect" that takes place after a natural disaster where everyone supports one another more fully as quality of interactions were seen to increase after a hurricane. However, the increase in quality of interactions is marginal and could be the result of latent variables. Lastly, there appeared to be no differences in student-faculty interactions when considering if students experienced a hurricane or not. It is likely that students are continuing their routine plans of researching, seeking advisement, and taking courses with faculty members. This could be due to increased technology, which has allowed for more remote work. While no major findings rose from analyses, sometimes no findings are good findings.

Center for Postsecondary Research, Indiana University Bloomington; nsse.indiana.edu; kfassett@iu.edu

Results cont.

Table 1. Scale Means and Statistics by Hurricane Status

	Hurricane		Non-Hurricane				
	Mean	SD	Mean	SD	t	Sig.	*d*
Supportive Environments	34.4	2.25	35.0	2.11	1.735		
Quality of Interactions	24.6	3.68	24.6	3.69	0.189		
Student-Faculty Interaction	42.0	2.13	41.7	2.28	-1.211		

Note: *p < .05, **p < .01, ***p < .001.

Table 2. Standardized Regression Coefficients for Hurricane

	Hurricane		Non-Hurricane		
	B	Std. Error	β	*t*	*p*
Supportive Environments	-.011	.011	-.005	-.0946	
Quality of Interactions	.034	.011	.017	2.998	***
Student-Faculty Interaction	-.002	.010	-.001	-.207	

Note: *p < .05, **p < .01, ***p < .001. The dependent variables were standardized before entry into the models so that coefficients can be interpreted as effect sizes

Discussion Question 3

What are the implications for the population you are studying and your data?

Implications & Future Research

- Three-core recommendations emerged from the literature to guide administrators and shape policies in the future, highlights include: training and hiring administrators with crisis management leadership, requiring all campus units to have in place continuity plans, and developing methods to prepare students should an emergency occur.
- The categorization of students into the two variables of experiencing a hurricane or not leads to additional thoughts for inquiry.
- Controlling for student demographics may assist understanding if structural diversity is an element that compounds the effects of hurricanes on students' experiences at the institutional level.
- Future research may also wish to track students and conduct experimental-style research to control for changes in behavior. Additionally, considering time as a variable of interest would be helpful to see if students' engagement changes from the moment of incident compared to days, weeks, or months after the hurricane. Lastly, institutions may desire to use focus groups or interviews to understand the phenomena in greater depth.

Conclusion

In short, it cannot be stressed enough that adequate preparation for emergencies is a necessity for higher education institutions. There are many measures needed to ensure students and the greater university communities are safe during natural disasters. Policies changes pertaining to administrative personnel practices and hiring, development of continuity plans, and management of student emotional well-being are needed to continue the successful operation of colleges and universities. Although major statistical findings did not emerge from this study, continued research should be a compelling interest of higher education institutions to continue to understand the trauma that can ensue from natural disasters. For the handout visit: **http://nsse.indiana.edu/html/publications_presentations.cfm**